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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,128	09/18/2003	Foster D. Hinshaw	3336.1016-003	7171

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HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER	
FLEURANTIN, JEAN B	

ART UNIT	PAPER NUMBER
2162	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,128	HINSHAW, FOSTER D.	
	Examiner	Art Unit	
	JEAN B. FLEURANTIN	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to the preliminary amendment filed on 09/18/2003.

Claims 1- 38 are presented for examination.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 5/26/2006, 8/30/2004, 8/23/2004, 6/04/2004, 4/26/2004 and 9/18/2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The Drawings submitted on 9/18/2003 are acknowledged.

Specification / Claim Objections

The abstract, page 60, is objected because the "Title" should not be into the same page. Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claimed "operating software" as recite in claim 13, line 2.

Further, see MPEP 608.01 and 2173.

Claim 13, line 4, "of of" should be "of". Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent Application No.10/667,128. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to the patent Application No. 10/667,128 claim 1 to interchangeably "host processors" to "host computers" in order to provide multi-group computer architecture in which multi computers are connected by a network; see patent Application No. 10/667,128.

Claim 1 of U.S. patent Application No. 10/667,128 contain(s) every element of claim 1 of instant applications serial No. 10/668,113 and 10/666,729 and thus anticipate the claim 1 of the instant application. Claim 1 of the instant application therefore is not patently distinct from the earlier patent application claim 1 and as such as are unpatentable over obvious-type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by the earlier claim.

Instant application **10/667,128**	**10/668,113**	**10/667,729**
An asymmetric data processing system comprising: a first group of one or more host computers, each comprising a memory, a network interface and one or more Central Processing Units (CPUs), each host computer accepting and responding to requests to process data;	An asymmetric data processor comprising:a first group of nodes comprising one or more host processors, each host comprising a memory, a network interface, and one or more Central Processing Units (CPUs), wherein each host accepts and responds to queries for data, and transforms such queries into one or more jobs;	An asymmetric data processor comprising: one or more host computers, each including a memory, a network interface and at least one CPU, each host computer being responsive to requests from end users and applications to process data;
a second group of two or more Job Processing Units (JPUs), operating autonomously and asynchronously from one another, each JPU consisting of a memory, a network interface, a data interface with exclusive access to one or more sources of data, and	a second group of nodes comprising one or more Job Processing Units (JPUs), wherein each JPU comprises: a memory, for storing data a network interface, for receiving data and instructions a streaming data interface, for receiving data from a streaming data source;	one or more Job Processing Units (JPUs), each having a memory, a network interface, one or more storage devices, and at least one CPU, each JPU being responsive to requests from host computers and from other JPUs to process data;
one or more general purpose CPUs, each JPU in the second group being responsive to requests received from a host computer to execute jobs, the jobs containing instructions for the processing of a particular subset of data under the JPU's exclusive control; and	one or more general purpose CPUs, for responding to requests from at least one host computer in the first group, and to requests from other JPUs in the second group, and	a network enabling the host computers and the JPUs to communicate between and amongst each other, each of the host computers and JPUs forming a respective node on the network; and
	one or more Programmable Streaming Data Processors (PSDPs), which perform primitive functions directly on data received from the streaming data interface, each PSDP thus performing	a plurality of software operators that allow each node to process data in a record-by-record, streaming fashion in which (i) for each operator in a given sequence of operators, output of the operator is input

a network connecting the network interfaces within each group and between the two groups.	initial processing on a set of data; and a network connecting the nodes within each group and between the two groups, and wherein a JPU receives jobs from one or most nodes in the first group, performs work requested by the job, and forms a reply.	to a respective succeeding operator in a manner free of necessarily materializing data, and (ii) data processing follows a logical data flow and is based on readiness of a record, such that as soon as a subject record is ready record data is passed for processing from one part to a next part in the logical data flow, the flow of record data during data processing being substantially continuous so as to form a stream of record processing from operator to operator within nodes and across nodes of the network.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus)." ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Accordingly, absent a terminal disclaimer, claims 1 and were properly rejected under the doctrine of obviousness-type double patenting." (In re Goodman (CAFC) 29 USPQ2d 2010 (12/3/1993).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-38 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,507,834 issued to Kabra et al., ("Kabra").

As per claim 1, Kabra discloses "asymmetric data processing system comprising: a first group of one or more host computers, each comprising a memory, a network interface and one or more Central Processing Units (CPUs), each host computer accepting and responding to requests to process data" (i.e., user interface, SQL queries, transforms query into extended SQL syntax and transmits to data server; see col. 9, line 66 to col. 10, line 5);

"a second group of two or more Job Processing Units (JPUs), operating autonomously and asynchronously from one another, each JPU consisting of a memory, a network interface" (i.e., communicating between processors on a symmetric multiprocessing system, memory used as the transport vehicle; see col. 7, lines 19-26 & Fig. 1), "a data interface with exclusive access to one or more sources of data, and one or more general purpose CPUs" (i.e., graphical user interface that querying and updating; see col. 9, line 66 to col. 10, line 2), "each JPU in the second group being responsive to requests received from a host computer to execute jobs, the jobs containing instructions for the processing of a particular subset of data under the JPU's exclusive control" (i.e., transmitting request to the master, this client address information is globally unique and includes the client address and port; see col. 11, lines 50-54) ; and

"a network connecting the network interfaces within each group and between the two groups" (i.e., transmitting over network from one node to another; see col. 9, lines 31-34 and col. 7, lines 2-12 and Fig. 1).

As per claim 2, Kabra discloses "the data comprises structured records" (see col. 6, lines 54-56).

As per claims 3 and 4, Kabra discloses "the data comprises a mixture of fixed and variable length fields of various data types" (see col. 6, 54-58).

As per claims 5 and 6, Kabra discloses "the sources of data comprise one or more storage devices which are directly accessed by no other JPU in the second group and by none of the host computers in first group" (see col. 10, 49-50).

As per claims 7 and 8, Kabra discloses "autonomous operation is such that host computers in the first group do not coordinate processing across JPUs" (see col. 7, lines 19-26 & Fig. 1).

As per claim 9, Kabra discloses "in which JPUs in the second group manage the storage devices autonomously, such that they have exclusive responsibility for the mapping between the location and representation of data in memory and the location and representation of data within the storage devices" (see col. 7, lines 43-47).

As per claim 10, Kabra discloses "in which JPUs in the second group manage their associated local storage devices by performing at least one function selected from a group consisting of: storage allocation and deallocation; insertion, deletion and retrieval of records; creation and deletion and maintenance of tables, views and indices; mirroring and replication; and compression and decompression" (see col. 10, lines 60-67).

As per claim 11, Kabra discloses "in which the JPUs in the second group further comprise a storage manager component which is responsible for hiding details of storage management from other components of the JPUs" see col. 7, lines 19-26 & Fig. 1).

As per claim 12, Kabra discloses "in which the storage manager component checks requests to insert record data into a table to ensure that the record data conforms to the table's definition" (see col. 10, lines 60-67).

As per claim 13, Kabra discloses "in which the JPUs in the second group manage transactions autonomously, containing operating software which is responsible for at least one of the following functions: starting, pre-committing, committing and aborting transactions against data on the JPU" 9 see col. 7, lines 19-26 & Fig. 1).

As per claims 14 and 16, Kabra discloses "the JPUs in the second group control concurrent access to data that is local to the JPU, containing software which is responsible for locking the local data and identifying dependencies between transactions that process local data" (see col. 7, lines 19-26).

As per claim 15, Kabra discloses "in which the JPUs in the second group perform mirroring autonomously, by ensuring that modifications to data local to a first JPU are replicated redundantly on another device" (see col. 8, lines 22-24).

As per claim 17, Kabra discloses "in which the JPUs in the second group may receive new jobs before completing older jobs, and where the resources required to satisfy jobs are scheduled locally and autonomously by the JPUs that own the resources" (see col. 9, lines 31-34).

As per claims 18-23, the limitations of claims 18-23 are similar to claims 1-6, therefore, the limitations of claims 18-23 are rejected in the analysis of claims 1-6, and these claims are rejected on that basis.

As per claim 24, Kabra discloses "each JPU in the second group further comprises a scheduling component, and each JPU processes its assigned jobs and returns results to a requesting host in the order and at the time that the scheduling component specifies" (see col. 8, lines 19-16).

As per claims 25-28, the limitations of claims 25-28 are similar to claims 29-33, therefore, the limitations of claims 25-28 are rejected in the analysis of claims 29-33, and these claims are rejected on that basis.

As per claims 29 and 30, Kabra discloses "in which the hosts in the first group are exclusively responsible for interfacing to external applications, thereby supporting the use of JPUs having different processing capabilities, without requiring changes to be made to the applications making requests" (see col. 12, lines 11-23).

As per claims 31 and 32, Kabra discloses "in which a pre-existing application that makes a request in a standard query language of the system, results in the host distributing jobs to one or more JPUs in the second group, without having to change the pre-existing application" (see col. 12, lines 25-34).

As per claim 33, Kabra discloses "in which the identity of a JPU primarily responsible for processing a given subset of data is determinable as a function of the data" (see col. 12, line 18-20).

As per claim 34, Kabra discloses "a third group of Large Job Processing Units (LJPUs), each LJPU being responsive to jobs, the LJPUs having greater memory and processing capabilities than the JPUs; and network also connects LJPUs in the third group to the computers of the other groups" (see col. 7, lines 10-19).

As per claims 35-38, the limitations of claims 35-38 are similar to claims 24 and 34, therefore, the limitations of claims 35-38 are rejected in the analysis of claims 24 and 34, and these claims are rejected on that basis.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Singh et al., USPN 6,477,540 relates to systems and methods for performing queries on data stored in a database.

CONTACT INFORMATION

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571-272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bolte Fleurantin
Patent Examiner
Technology Center 2100
August 2, 2007

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :5/26/2006, 8/30/2004, 8/23/2004, 6/04/2004, 4/26/2004 and 9/18/2003.